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| Logo**Good Shepherd Lutheran College**  **Assessment Task**  **Cover Sheet** | | |
| ***DETAILS*** | | |
| ***Title:*** *Measurement Investigation* | | |
| ***Teacher:*** *Sajtos, Puschpa & Marie* | ***Student Name:*** | ***Class:*** |
| ***Date set:*** *09.02.2012* | ***Due date:*** *16.02.2012* | |
| ***PURPOSE & BACKGROUND OF AS SESSMENT TASK*** | | |
| Students have had the opportunity in class to explore the concepts of measurement, including perimeter, area and surface area. As an extension to this they are required to complete an Investigation to design a secondary school building and calculate the costs involved, as well as write a report and persuasive letter to the principle. | | |
| ***DESCRIPTION OF ASSESSMENT TASK*** | | |
| Make sure to read the instructions and assessment criteria carefully before starting your investigation.  You need to show all of your working out and solutions.  Work must be presented in a neat and ordered way.  Make sure to be detailed and in your written part. | | |
| ***ASSESSMENT CRITERIA*** | | |
| |  |  | | --- | --- | | Criterion C |  | | Criterion D |  | | | |

***Design the Secondary school building***

**Part A**

* Draw up some ideas (think about interesting shapes, colours, light etc.). Remember to include several rooms.
* Decide on a design and make a good copy (in colour).
* Label windows, doors etc. and give each wall a number/letter as well as measurements.

**Part B**

* Calculate the area of each wall (subtract doors/windows) and each floor. The working out needs to be set out on grid paper and easy to follow. Display your finding in a table.
* You need to put carpet into the rooms. The carpet costs $15.60 per m²
* Each wall needs to be painted. White walls will require 2 coats. Coloured walls require one coat of white and one coat of coloured paint and the ceiling requires 1 coat. White paint costs $80 for 10l (1l covers 15m2). White paint costs $57.90 for 4l, coloured paint $69.90 for 4l and ceiling paint $43.97 for 4l.
* Display your total costs in a table

**Part C**

* Write a letter to the principle explaining why he should build your version of the secondary school building. Possible aspect to address could be:
* Costs
* Environmental issues
* Learning environment
* Aesthetic aspects
* Write a paragraph on how the knowledge applied in this task may help you outside of school? Explain the importance of knowing the correct formulas.
* If you were to do this Investigation again, how do you think you could improve your level or work?
* Explain how you know that your working out and solutions are correct?

**Extension:**

If you would like to achieve higher levels in the assessment criteria, think about other detail you might add to your building, e.g. solar panels, paper recycling etc. in your report.

**MYP MATHEMATICS: Assessment Criteria Year 5**

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|  | **Criteria C: Communication in Mathematics** | | | **Criteria D: Reflection in Mathematics** | | |
| 7-8 |  | |  |  | |  |
| 5-6 | **C1** The student shows **good use** of mathematical language and forms of mathematical representation. |  |  | **D1** The student **critically explains** whether his or her results make sense in the context of the problem. | Your letter to the principle is detailed and convincing. It addresses several key points. |  |
| **C2** The lines of reasoning are **concise, logical and complete**. | All of your calculations are complete and easy to follow | **D2** The student provides a **detailed explanation** of the importance of his or her findings in connection to real life where appropriate. | You have explained in detail how the knowledge applied in this task can help you in real life |  |
| **C3** The student moves **effectively** between different forms of representation. |  | **D3 T**he student **justifies** the degree of accuracy of his or her results where appropriate. | You have stated if your results make sense and given proof |  |
| **D4** The student suggests improvements to his or her method where appropriate. |  |  |
| 3-4 | **C1** The student shows **sufficient use** of mathematical language and forms of mathematical representation. |  |  | **D1** The student **correctly but briefly explains** whether his or her results make sense in the context of the problem. | Your letter to the principle is detailed and convincing. It addresses some key points. |  |
| **C2** The lines of reasoning are **clear though not always logical or complete**. | Most of your calculations are complete and easy to follow | **D2** The student **describes the importance** of his or her findings in connection to real life where appropriate. | You have explained how the knowledge applied in this task can help you in real life |  |
| **C3** The student moves between different forms of representation with **some success**. |  | **D3** The student **attempts to justify** the degree of accuracy of his or her results where appropriate. | You have stated if your results make sense and attempted to give proof |  |
| **D4** | |  |
| 1-2 | **C1** The student shows **basic use** of mathematical language and/or forms of mathematical representation. |  |  | **D1** The student **attempts to explain** whether his or her results make sense in the context of the problem. | Your letter to the principle has some detail. It addresses some key points. |  |
| **C2** The lines of reasoning are **difficult to follow**. | Some of your calculations are complete and easy to follow | **D2** The student **attempts to describe** the importance of his or her findings in connection to real life where appropriate. | You have tried to explained how the knowledge applied in this task can help you in real life |  |
| **D3** | |  |
| **C3** | | **D4** | |  |
| 0 | The student does not reach a standard described by any of the descriptors above. | |  | The student does not reach a standard described by any of the descriptors above. | |  |